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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,524	04/27/2001	Stanley K. Honey	NTGR-10006US3	3729
28554	7590	10/05/2004	EXAMINER	
VIERRA MAGEN MARCUS HARMON & DENIRO LLP 685 MARKET STREET, SUITE 540 SAN FRANCISCO, CA 94105			HANNETT, JAMES M	
			ART UNIT	PAPER NUMBER
			2612	5

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,524

Applicant(s)

HONEY ET AL.

Examiner

James M Hannett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-12, 18-20 and 37-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12, and 37-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 38 is objected to because of the following informalities: Claim 38 recites the limitations "said first down", "said video", "said step of adding". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1: Claims 1-6, and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,892,554 DiCicco et al.

2: As for Claim 1, DiCicco et al teaches in the abstract and on Column 6, Lines 15-67 a method for enhancing the broadcast of a live event, comprising the steps of: receiving video from a first camera (12); sensing field of view data representing a field of view of the first camera (14); determining a position and orientation of a video image of a target in the capture video at least partially based on recognizing one or more portions of the video image (natural landmarks) of the target in the captured video and at least partially based on the field of view; and modifying the captured video by enhancing at least a segment of the video image of the target. DiCicco et al teaches a system that uses a camera (12) to capture a reference video signal of a stadium. DiCicco et al teaches that a surface of the stadium can be replaced with an advertisement by

identifying landmarks in the video image and superimposing the advertisement over the video image.

3: In regards to Claim 2, DiCicco et al teaches on Column 7, Lines 44-58 the step of determining a position includes the steps of: determining a rough estimate of the position of the target in the captured video using the field of view data; DiCicco et al teaches selecting a suitable point to insert the image based on a selected X,Y coordinate that is chosen. This is viewed by the examiner as determining a rough estimate of the position of the target. Furthermore, DiCicco et al teaches on Column 10, Lines 38-43 and Column 8, Lines 3-6 determining a more precise estimate of the position of the target in the captured video using a pattern recognition technique. DiCicco et al teaches that after a user selects the X,Y coordinates to insert the advertisement, a search function is used that identifies landmarks in the video image and an estimate of the translation in the X and Y directions is obtained which refine the X,Y coordinate that is chosen to better fit into the image. The examiner views the pattern recognition as identifying the landmarks in the video image.

4: As for Claim 3, DiCicco et al teaches on Column 10, Lines 38-43 determining whether the target is within the field of view of the first camera. DiCicco et al teaches identifying landmarks in the video image to determine the location that the image will be inserted. The process of searching for landmarks is viewed by the examiner as determining if the target is within a field of view of the camera.

5: In regards to Claim 4, DiCicco et al teaches on Column 10, Lines 38-45 the step of determining is also at least partially based on comparing the field of view data to pre-stored

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location data for the target. DiCicco et al teaches comparing the locations of the landmarks in the current image with the landmark locations in the reference image (48).

6: As for Claim 5, DiCicco et al teaches that an advertisement can be inserted into any position in a stadium. DiCicco et al teaches on Column 13, Lines 43-49 that the invention is not limited to identifying an existing advertisement as the target zone of the scene. Therefore, DiCicco et al teaches that the advertisement can be inserted over an existing advertisement.

7: In regards to Claim 6, DiCicco et al teaches on Column 13, Lines 1-6 and Column 6, Lines 35-40 and depicts in Figure 11 replacing an image of a surface in a stadium with an advertisement (174).

8: In regards to Claim 8, DiCicco et al teaches on 12, Lines 1-10 enhancing the video image of the target does not include replacing the video image of the target; and the method further includes the step of accounting for occlusions. DiCicco et al teaches that the replacement of the video image with the advertisement can be suppressed if the target area is occluded.

9: As for Claim 10, DiCicco et al teaches on Column 6, Lines 64-67 and Column 7, Lines 11 the steps of: storing the target's location before the step of capturing; and storing an un-occluded image of the target before the step of capturing. DiCicco et al teaches that a reference image is captured of the stadium when the stadium is empty. This image is analyzed to determine the location of landmarks.

10: In regards to Claim 11, DiCicco et al teaches on Column 11, Lines 39-42 learning changes to the video image of target image. DiCicco et al teaches tracking the movement of the landmarks during a broadcast to allow the location of the advertisement to be changed during broadcast.

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11: As for Claim 12, DiCicco et al teaches on Column 12, Lines 56-67 comparing the video image of the target in the captured video (location of the landmarks in the current image) with a video image stored in a memory (landmark locations in reference image); and updating the memory to include a revised image of the target.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12: Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,892,554 DiCicco et al.

13: In regards to Claim 40, DiCocco et al teaches in the abstract and on Column 6, Lines 15-67 and Column 2, Lines 28-35 a method for adding a graphic to a video of a football game during a broadcast of the football game, comprising: It is inherent that the system of DiCocco contain a storage device to store the reference image. DiCocco et al teaches on Column 2, Lines 27-30 a processing unit in communication with the storage device, the storage device stores data for the processing unit, the processing unit is capable of performing a method comprising the steps of: receiving video from a camera (12). DiCocco et al teaches on Column 2, Lines 27-35 determining a position and orientation of a video image of a target area in the video, the step of determining a position is at least partially based on recognizing one or more portions of the video (landmarks), and the step of determining a position is also based on the field of view data, and causing an advertisement to be inserted in the target area based on the step of determining a

position and orientation of the landmarks. The field of view data is viewed by the examiner as the captured video by the video camera in the current image. The landmarks that are capture are in the current field of view of the video camera. DiCocco et al teaches on Column 2, Lines 27-35 that the current field of view is determined by using pattern recognition by comparing the location of landmarks in the current image to the location of landmarks in the reference image. However, DiCocco does not teach that the field of view data for the camera is based on one or more field of view sensors that do not use pattern recognition. DiCocco teaches on Column 1, Lines 48-67 that it was well know in the art at the time the invention was made to use pan and tilt sensors (instead of pattern recognition) that were installed in a video camera to detect the current field of view of the camera.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use pan and tilt sensors (instead of pattern recognition) that were installed in a video camera to detect the current field of view of the camera in order to decrease cost by not including the complex pattern recognition circuitry that allows DiCocco to detect the landmarks.

14: Claims 7, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,892,554 DiCicco et al in view of USPN 5,264,933 Rosser et al.

15: As for Claim 7, DiCicco et al teaches a system in which an advertisement can be inserted onto the surface of a stadium. However, DiCicco et al does not teach that the step of modifying includes highlighting a portion of a playing field.

Rosser et al teaches a system that can insert indicia into a surface during a live event. Rosser et al teaches on Column 5, Lines 35-43 that it is advantageous to artificially mark the various field lines in a football game in order to enhance the appearance of a live event.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the system of DiCocco et al to highlight the various field lines in a football game as taught by Rosser et al in order to enhance the appearance of a live event.

16: As for Claim 37, DiCocco et al teaches in the abstract and on Column 6, Lines 15-67 and Column 2, Lines 28-35 a method for adding a graphic to a video of a football game during a broadcast of the football game, comprising the steps of: storing an indication of a location of landmarks, determining the locations position in the video; and adding a static image or indicia to the video at the locations position in the video. DiCocco et al teaches on Column 8, lines 65-67 and Column 9, Lines 1-6 the step of adding includes adding the static image or indicia to one or more portions of the video that are not occluded and not adding the static image or indicia to one or more portions of the video that are occluded. DiCocco et al teaches a system in which an advertisement can be inserted onto the surface of a stadium. However, DiCocco et al does not teach that the step of modifying includes highlighting a portion of a playing field.

Rosser et al teaches a system that can insert indicia into a surface during a live event. Rosser et al teaches on Column 5, Lines 35-43 that it is advantageous to artificially mark the various field lines in a football game in order to enhance the appearance of a live event.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the system of DiCocco et al to highlight the various field lines in a football game as taught by Rosser et al in order to enhance the appearance of a live event.

Rosser et al does not state that the yard line that indicates the first down can be highlighted. However, Official notice is taken that it was well known in the art at the time the

invention was made that a first-down yard line was a well known field line in a football game at the time the invention was made.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the invention of DiCocco et al in view of Rosser et al to highlight the first down marker since Rosser et al teaches that it is advantageous to artificially mark the various field lines in a football game and it was well known in the art at the time the invention was made that a first-down yard line was a well known field line in a football game.

17: In regards to Claim 38, DiCocco et al teaches in the abstract and on Column 6, Lines 15-67 and Column 2, Lines 28-35 a method for adding a graphic to a video of a football game during a broadcast of the football game, comprising the steps of: storing an indication of a location of landmarks, determining the locations position in the video; and adding a static image or indicia to the video at the locations position in the video. DiCocco et al teaches on Column 8, lines 65-67 and Column 9, Lines 1-6 the step of adding includes adding the static image or indicia to one or more portions of the video that are not occluded and not adding the static image or indicia to one or more portions of the video that are occluded. DiCocco et al teaches a system in which an advertisement can be inserted onto the surface of a stadium. However, DiCocco et al does not teach that the step of modifying includes highlighting a portion of a playing field.

Rosser et al teaches a system that can insert indicia into a surface during a live event. Rosser et al teaches on Column 5, Lines 35-43 that it is advantageous to artificially mark the various field lines in a football game in order to enhance the appearance of a live event.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the system of DiCocco et al to highlight the various field lines in a football game as taught by Rosser et al in order to enhance the appearance of a live event.

Rosser et al does not state that the yard line that indicates the first down can be highlighted. However, Official notice is taken that it was well known in the art at the time the invention was made that a first-down yard line was a well known field line in a football game at the time the invention was made.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the invention of DiCocco et al in view of Rosser et al to highlight the first down marker since Rosser et al teaches that it is advantageous to artificially mark the various field lines in a football game and it was well known in the art at the time the invention was made that a first-down yard line was a well known field line in a football game.

18: As for Claim 39, DiCocco et al teaches in the abstract and on Column 6, Lines 15-67 and Column 2, Lines 28-35 a method for adding a graphic to a video of a football game during a broadcast of the football game, comprising: It is inherent that the system of DiCocco contain a storage device to store the reference image. DiCocco et al teaches on Column 2, Lines 27-30 a processing unit in communication with the storage device, the storage device stores data for the processing unit, the processing unit is capable of performing a method comprising the steps of: storing an indication of a location of landmarks, determining the locations position in the video; and adding a static image or indicia to the video at the locations position in the video. DiCocco et al teaches on Column 8, lines 65-67 and Column 9, Lines 1-6 the step of adding includes adding the static image or indicia to one or more portions of the video that are not occluded and not

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adding the static image or indicia to one or more portions of the video that are occluded. DiCicco et al teaches a system in which an advertisement can be inserted onto the surface of a stadium. However, DiCicco et al does not teach that the step of modifying includes highlighting a portion of a playing field.

Rosser et al teaches a system that can insert indicia into a surface during a live event. Rosser et al teaches on Column 5, Lines 35-43 that it is advantageous to artificially mark the various field lines in a football game in order to enhance the appearance of a live event.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the system of DiCicco et al to highlight the various field lines in a football game as taught by Rosser et al in order to enhance the appearance of a live event.

Rosser et al does not state that the yard line that indicates the first down can be highlighted. However, Official notice is taken that it was well known in the art at the time the invention was made that a first-down yard line was a well known field line in a football game at the time the invention was made.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the invention of DiCicco et al in view of Rosser et al to highlight the first down marker since Rosser et al teaches that it is advantageous to artificially mark the various field lines in a football game and it was well known in the art at the time the invention was made that a first-down yard line was a well known field line in a football game.

Allowable Subject Matter

19: Claims 18-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach the method for enhancing the broadcast of a target at a live event by capturing a first frame of video which is viewed as the reference image using a first camera and capturing a second frame of video which is viewed as the video of the live event using a second camera. Furthermore, the prior art does not teach that the first and second cameras can be placed adjacent to each other to broadcast a live event.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

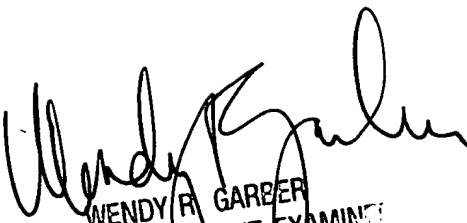
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September 22, 2004


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